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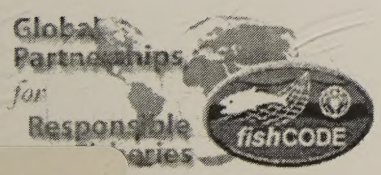
Report of the

FIRST REGIONAL CONFERENCE ON THE SUSTAINABILITY OF FISHERIES RESOURCES IN THE BRAZIL-GUIANAS SHELF

Paramaribo, Suriname, 5–7 March 2002



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FIRST REGIONAL CONFERENCE ON THE SUSTAINABILITY OF FISHERIES RESOURCES IN THE BRAZIL-GUIANAS SHELF

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 2002

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PREPARATION OF THIS REPORT

At the request of the Government of Suriname, the Food and Agriculture Organization of the United Nations organized the First Regional Conference on the Sustainability of Fisheries Resources in the Brazil-Guianas Shelf under the guidance and support of the Secretariat of the Western Central Atlantic Fishery Commission (WECAFC). The Conference was held in Paramaribo, Suriname from 5-7 March 2002.

With the support of two interregional FAO/Trust Fund Projects, viz. the FAO/DANIDA project on "Training in Fish Stock Assessment and Fishery Research Planning" (GCP/INT/575/DEN) and the FAO/NORWAY "Management for Responsible Fisheries Project" (GCP/INT/648/NOR), the WECAFC Ad Hoc Working Group on Shrimp and Groundfish Fisheries in the Brazil-Guianas shelf held four stock assessment workshops (1996-2000) that focused on the status and management of major commercial species of shrimp and groundfish. The results of these workshops were published as FAO Fisheries Report No. 600 (1997), FAO Fisheries Report No. 628 (1999), and FAO Fisheries Report No. 651 (2001). A meeting of fisheries ministers and managers, held in Port-of-Spain, Trinidad and Tobago from 26-29 March 2001, reviewed the outcomes and implications of the assessments and recommended that they be discussed with the fishing industry. The resulting First Regional Conference was a very important step in the process of promoting regional co-operation for the management and conservation of the shared and straddling fish stocks of the Brazil-Guianas Shelf.

The Conference was organized by FAO with the support of the Government of Suriname and the fishing industry of Suriname. This report was drafted at the Conference and edited by Bisessar Chakalall, Angel Gumy and Kevern Cochrane. The assistance of Ms Françoise Schatto with final publication preparation is gratefully acknowledged.

The Conference report is published as a contribution of the Management for Responsible Fisheries (MRF) Project, which aims at improving the quality of scientific advice for fisheries management and facilitating a major involvement of all stakeholders. MRF is a component of the FAO Fisheries Department's FishCode Programme, the "Interregional Programme of Assistance to Developing Countries for the Implementation of the Code of Conduct for Responsible Fisheries."

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FAO/Western Central Atlantic Fishery Commission.

Report of the first Regional Conference on the Sustainability of Fisheries Resources in the Brazil-Guianas Shelf. Paramaribo, Suriname, 5-7 March 2002.

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ABSTRACT

This document is the final version of the report of the First Regional Conference on the Sustainability of Fisheries Resources in the Brazil-Guianas Shelf, held in Paramaribo, Suriname, from 5 to 7 March 2002. The main objectives of the Conference were to share information and the best scientific evidence available on the status of the main commercial species of shrimp and groundfish in the region, discuss and evaluate management recommendations and their applicability and discuss a way forward for improving cooperation in fisheries research and management in the subregion. This was the first time fisheries scientists, managers and the fishing industry met to collectively evaluate scientific information generated by the countries and the management measures proposed, and to decide on follow-up actions.

The Conference agreed that meetings of this nature were essential for achieving sustainable use of the fisheries resources of the Brazil-Guianas Shelf and should be held regularly. Regular meetings should contribute to the formation of a regional fisheries management body for the Brazil-Guianas Large Marine Ecosystem in the longer term. Brazil offered to host the next meeting in 2003. With respect to the state of exploitation of the fisheries resources, the Conference confirmed the trends identified by the WECAFC Ad Hoc Working Group. The Conference further expressed strong appreciation for the Group's work and recommended that it be continued. The fishing industry agreed in principle to support the Ad Hoc Group. Even though opposing views were expressed and defended with respect to some of the proposed management measures, it was agreed that management actions had to be taken now to arrest the declining trends in production. The Conference agreed that a closed season for shrimp was a management measure to be applied and that individually each country should examine it.

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OPENING OF THE SESSION

1. The Meeting was held at the Torarica Hotel, Paramaribo, Suriname, from 5 to 7 March 2002, at the kind invitation of the Government of Suriname. The Agenda is shown in Appendix A.

2. Seventy-five representatives from the Government, fishing industry and scientific community of Brazil, French Guiana, Guyana, Suriname, Trinidad and Tobago and from the Caribbean Community (CARICOM), the World Wildlife Fund (WWF) and the Food and Agriculture Organization of the United Nations (FAO), and observers from France, Mexico, Japan and the United States of America attended the meeting. The list of participants is given in Appendix B of the report. Documents presented to the Conference are noted in Appendix C.

3. At the opening ceremony, the delegates were welcomed by the Permanent Secretary of the Ministry of Agriculture, Animal Husbandry and Fisheries, Mr Jaswant Sahtoe, who said that it was an honour for Suriname to host the Conference with the assistance of the fishing industry of Suriname and of FAO. He mentioned that the Conference provided a unique opportunity for the countries of the Brazil-Guianas region to work together in determining the future of fisheries in the region.

4. Mr Robert Bromet welcomed the participants to Suriname and to the Conference on behalf of the fishing industry of Suriname and the National Coordinating Committee, which assisted in organizing the Conference. He noted that regional cooperation was essential for achieving sustainable fisheries in the Brazil-Guianas Shelf because the majority of the fisheries resources in the Shelf were either shared or straddling stocks. The fishing industry of Suriname was aware of the need for regional cooperation and strongly supported the holding of the Conference.

5. The Secretary of WECAFC, Mr Bisessar Chakalall, welcomed the participants on behalf of the Director-General of FAO, Mr Jacques Diouf, and expressed FAO's appreciation to the Government and fishing industry of Suriname for hosting the Conference. He emphasized the important role the WECAFC Ad Hoc Working Group on Shrimp and Groundfish in the Brazil-Guianas Shelf[1] was playing in promoting responsible fisheries in the subregion. He observed that it was probably the first time that fishery managers, the fishing industry and scientists of the subregion were meeting and that the Conference represents an important starting point for improving regional cooperation in the management of the fisheries resources of this shared ecosystem, the Brazil-Guianas Large Marine Ecosystem. He observed that the Conference would share information and knowledge on shrimp and groundfish resources in the Brazil-Guianas Shelf and discuss issues of common interest and a way forward for improving regional cooperation. In noting that the idea and initiative for this Conference came from the Honourable Minister of Agriculture, Animal Husbandry and Fisheries of Suriname, he expressed hope that it would result in periodic conferences of a similar nature in future.

6. The Honourable Minister of Agriculture, Animal Husbandry and Fisheries, Mr Geetapersad Gangaram-Panday, officially opened the Conference. He observed that attaining sustainable fisheries in the Brazil-Guianas Shelf was important for the food security of the

[1] Hereafter called Ad Hoc Working Group.

countries and for the attainment of economic and social development goals of the countries of this subregion. In Suriname the fisheries sector currently employed about 8 000 persons and export revenues were higher than the earnings from the agriculture sector. A new fisheries quality assurance law was enacted and a draft new fisheries law has been prepared and should be enacted soon.

7. The Minister mentioned that Suriname strongly supported the critical role played by the WECAFC Ad Hoc Working Group on Shrimp and Groundfish Fisheries in the Brazil-Guianas Shelf in providing an effective mechanism for interaction of fisheries managers, scientists and the fishing industry for the generation and sharing of information, obtained through scientific analyses, essential for responsible fisheries. He pointed out that the Conference provided a unique opportunity for the countries of the Brazil-Guianas Shelf to collaborate in determining the future of the fisheries of the region, using the best available information generated by the Ad Hoc Working Group over the past six years. The Minister noted that the countries of the subregion should commit themselves to the implementation of the FAO Code of Conduct for Responsible Fisheries through policies and programmes that would secure the sustainability of the resources. In concluding, the Minister thanked FAO for its support in organising this Conference and wished the participants a successful meeting with positive results that would lead to social and economic benefits for the countries of the Brazil-Guianas Shelf.

ELECTION OF CHAIR

8. The proposal of Guyana that Suriname be elected Chair, Brazil the First Vice-Chair, and the representative of the fishing industry of Suriname the Second Vice-Chair, was unanimously accepted. In compliance with the proposal, Mr J. Sahtoe of Suriname, was elected as Chair, Mr F.O. Alves-Barbosa of Brazil as First Vice-Chair, and Mr R. Bromet of the fishing industry of Suriname as Second Vice-Chair.

ADOPTION OF THE AGENDA

9. The meeting adopted the Agenda that is given in Appendix A. The documents presented to the meeting are listed in Appendix C.

BACKGROUND

10. Since this was the first meeting of its kind for the subregion, the Secretariat provided the following background information to the participants to place the Conference in perspective.

Responsible fisheries and the international fishing community

11. The coming into force of the 1982 Convention of the Law of the Sea, the recent international agreements such as the 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (Compliance Agreement), the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (1995 UN Agreement on High Seas Fishery), and the Code of Conduct for Responsible Fisheries, have all stressed the need for international cooperation among states through organizations at subregional, regional, and global levels, for the conservation, management

and utilization of living aquatic resources. These developments have generated renewed interest in collaboration at the regional level.

12. These recent agreements emphasized the need for collaboration and cooperation in the management of shared, straddling and highly migratory stocks. Where only a few countries are involved, this may be achieved through bilateral or multilateral arrangements. Where several countries are involved, they are required to identify or establish an organization or arrangement to undertake management, and to participate in the activities of that organization. Failure to participate does not absolve a country of its responsibility to abide by the decisions of the organization or arrangement.

13. All the agreements include reference to the Precautionary Approach to fisheries management that stipulates that countries do not delay management action on the basis of a lack of information. In such cases, countries should proceed to manage with the best available scientific information and should adopt a conservative approach to management.

14. The Code of Conduct for Responsible Fisheries stresses the importance of subregional and regional organizations e.g. paragraph 7.3.4. states:

> *States and, where appropriate, subregional or regional fisheries management organizations and arrangements should foster and promote international cooperation and co-ordination in all matters related to fisheries, including information gathering and exchange, fisheries research, management and development.*

WECAFC

15. The Western Central Atlantic Fishery Commission (WECAFC) was established in 1973 by Resolution 4/61 of the FAO Council under Article 4 of the FAO Constitution in light of the challenges faced by the fishing nations operating in the area. The purpose of the Commission was to assist in international cooperation efforts for the conservation, development and utilization of living aquatic resources, especially shrimp, of the Western Central Atlantic region. WECAFC is a fisheries management advisory body.

16. The Members of WECAFC are Antigua and Barbuda, Bahamas, Barbados, Belize, Brazil, Colombia, Cuba, Dominica, European Community, France, Grenada, Guatemala, Guinea, Guyana, Haiti, Honduras, Jamaica, Japan, Republic of Korea, Mexico, Netherlands, Nicaragua, Panama, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Spain, Suriname, Trinidad and Tobago, United Kingdom, United States of America and Venezuela.

WECAFC Ad Hoc Working Group on Shrimp and Groundfish in the Brazil-Guianas Shelf

17. The WECAFC Ad Hoc Working Group on Shrimp and Groundfish Fisheries in the Brazil-Guianas Shelf has been working over the past six years on the assessment of the status of major commercial shrimp and groundfish species in the Brazil-Guianas Shelf. The member countries of the Ad Hoc Working Group are Brazil, French Guiana, Guyana, Suriname, Trinidad and Tobago and Venezuela. These countries share a common marine ecosystem, the Brazil-Guianas Shelf. The CARICOM Fisheries Programme supported the activities of the Ad Hoc Working Group.

18. The Ad Hoc Working Group recognized that the results of its assessments have implications for the management and conservation of the fisheries resources of the Brazil-Guiana Shelf, most of which are shared or straddling stocks. In this regard, the group recommended that the results of its analyses should be communicated to fisheries managers and the political directorate responsible for fisheries in the participating countries so that management and policy decisions can be adopted.

19. Based on this recommendation FAO organised the Meeting of Fisheries Managers and Ministers of the WECAFC Ad Hoc Working Group, 26-29 March 2001, Port-of-Spain, Trinidad and Tobago.

20. At the Meeting of Fisheries Managers and Ministers, the Government of Suriname proposed, and it was agreed, that a meeting be convened of representatives of the fishing industry, fisheries managers and scientists of the countries participating in the WECAFC Ad Hoc Working Group. The aim was to discuss the status of shrimp and groundfish resources in the Brazil-Guianas Shelf and other matters of interest to the industry.

21. The proposal from Suriname was stimulated by the fact that all the countries of the Brazil-Guianas Region were experiencing declines in the catches of shrimp. The decreasing trend in catches and the concerns regarding the social and economic implications derived from inadequate fisheries management were generally the same in each country. Non-sustainable fisheries management could impact on income, employment, food supply, foreign currency earnings, and the loss of natural resources.

22. Given the shared nature of many of the important fisheries resources of the Brazil-Guianas Shelf and the need for regional approaches to fisheries management and conservation, the Trinidad and Tobago meeting was of a strong view that the stakeholders should meet as a group to discuss the results of the assessments conducted by the Ad Hoc Working Group. The results from the Group have implications for sustainable fisheries production in the region.

OBJECTIVES OF THE MEETING

23. The overall goal of the Regional Conference on the Sustainability of Fisheries in the Brazil-Guianas Shelf was to achieve the sustainable utilization of the shrimp and groundfish fisheries in the Brazil-Guianas Shelf, most of which are either shared and or straddling stocks. The objectives were as follows:

- increase and improve communication and dialogue among the various stakeholders in the industry;
- inform stakeholders of the status of shrimp and groundfish resources on the Brazil-Guianas Shelf, based on the work of the WECAFC Ad Hoc Working Group on Shrimp and Groundfish Fisheries on the Brazil-Guianas Shelf;
- share information and knowledge on the shrimp and groundfish resources;
- consider issues of common interest facing the shrimp and groundfish fisheries of the Brazil-Guianas Shelf and identify possible solutions;

- discuss management measures identified by the Ad Hoc Working Group and their applicability; and
- identify a mechanism for future cooperation among stakeholders.

CODE OF CONDUCT FOR RESPONSIBLE FISHERIES

24. The Secretariat provided a brief overview of the Code of Conduct for Responsible Fisheries and its related guidelines and noted that all the major issues relating to fisheries were covered by the Code. These included fisheries management, fishing operations, fisheries research, the precautionary approach to fisheries management and the integration of fisheries in coastal area management. Aspects of the Code that were pertinent to the subregion and to the objectives of the Conference, such as regional cooperation, regional fishery bodies, research, data gathering, the precautionary approach, management measures and flag and port state duties, were highlighted.

25. A lively debate followed the presentation, especially on the precautionary approach, research, data and information gathering and sharing, and regional cooperation for sustainable fisheries production in the Brazil-Guianas Shelf. Participants identified with the aspects of the Code that were considered necessary for deriving sustainable benefits from the fisheries in the subregion and supported their implementation.

26. During the debate several participants emphasized the main roles of the interested parties attending the meeting in ensuring sustainability of the fisheries of the subregion. Governments overall and ultimate responsibility was to ensure fisheries sustainability. Technicians and managers (the Ad Hoc Working Group) had the responsibility of assisting governments in complying with their obligations through the provision of the best available scientific evidence. The fishing industry (interested parties) should contribute and assist in ensuring sustainability by conducting responsible fishing practices as outlined in the Code of Conduct for Responsible Fisheries and its related guidelines thus yielding sustained optimum economic and social benefits over time.

27. It was pointed out that even though the respective roles of the interested parties have a common goal, their specific objectives might be different and sometimes conflicting. The meeting agreed that these different objectives should be taken into account in defining national and subregional management approaches and measures.

REGIONAL REVIEWS

Shrimp fisheries

28. Based on the fisheries and management assessments conducted by the Ad Hoc Working Group, the Secretariat introduced documents WECAFC/B-G/I/3 and WECAFC/B-G/I/4, which contained the results and management recommendations of the Ad Hoc Working Group. It was reported that during the period 1997-2000, the Ad Hoc Working Group held five shrimp assessment and management workshops to assess the abundance and status of exploitation of the shrimp stocks in the Brazil-Guianas Shelf. The Ad Hoc Working Group focused its work on the assessment of the abundance and state of exploitation of the following shrimp species: *P. brasiliensis* (Red or Pink spotted shrimp); *P. subtilis* (Brown shrimp); *P. notialis* (Pink shrimp); *P. schmitti* (White shrimp); and *X. kroyeri* (Seabob).

29. The conclusions and management recommendations of the Ad Hoc Working Group were as follows.

- There was a consistent picture of increasing fishing mortality associated with decreases in biomass in relation to brown shrimp and pink spotted shrimp. Likely factors determining this situation were fishing mortality, increasing fishing close to the shore and environmental factors possibly linked to rainfall and resulting river flows.
- Analyses conducted for brown shrimp and pink spotted shrimp gave strong indications that at the current levels of fishing effort, aggregated economic results may be below the optimum. Potential revenue was possibly being dissipated. The Ad Hoc Working Group concluded that further bio-economic analysis was needed to monitor the situation.
- There was a need to critically evaluate the effectiveness of the management tools currently being used in the shrimp fisheries and how they can be improved, including effort controls, closed areas and closed seasons.
- A significant fishery for seabob existed for some years in Guyana and Suriname but there was an absence of information concerning the abundance, spatial distribution and population dynamics aspects of these species at the subregional level. Basic assessment should be undertaken on seabob, as well as on white and pink shrimp in future activities of the Ad Hoc Working Group.

Red snapper

30. The Ad Hoc Working Group focused on the abundance and state of exploitation of Red Snapper, *Lutjanus purpureus*, and arrived at the following conclusions and recommendations:

- the Red Snapper was a poorly regulated fishery and inadequate enforcement capability in most, if not all countries, was a serious limitation;
- both coastal states and flag states needed to co-operate in controlling fishing and reducing effort;
- until better information was available, fishing effort should, as a minimum be frozen and no additional effort should be allowed to enter the fishery;
- in some cases, there was also a need to increase the minimum size of the fish being caught;
- adequate monitoring systems need to be implemented with the full participation of both coastal and flag states; and
- effective management would require the countries to co-operate in combining data and information in order to conduct a regional fisheries assessment as a basis for developing an appropriate management strategy.

Groundfish

31. The Ad Hoc Working Group focused on the assessment of the status of the following species. Individual countries focused their work on the species for which they had data.

- *Lutjanus synagris* (Lane snapper, Vivaneav)
- *Macrodon ancylodon* (Bangamary, Dagoetifi)
- Micropogonias furnieri (Croaker, Cro-Cro)
- *Nebris microps* (Butterfish, Botervis)
- *Cynoscion virescens* (Kandratiki, Curbina)
- Cynoscion jamaicensis (Gongolare, Salmon)

32. The conclusions and management recommendations of the Ad Hoc Working Group were as follows:

- management was seriously hindered by lack of reliable information on important species;
- results of assessments for most species, where information was available, indicated high levels of exploitation, with most stocks being fully exploited and frequently overexploited;
- capture of undersized individuals was a serious problem in all countries both as by-catch and in directed fisheries;
- some gears, such as chinese seines (fyke nets) and shrimp trawls, catch large numbers of undersized fish. Effort with these gears should be reduced;
- technical measures, such as increase in minimum mesh size, by-catch reduction devices, time (closed seasons) and area closures, or a combination, should be introduced;
- countries should sustain and improve their data collection systems and programmes;
- all landings should be monitored to identify country of origin;
- exchange of information, especially between flag states and coastal states, was recommended;
- observer programmes should be implemented for data collection;
- regular regional reconciliation of all information for accuracy and completeness should became a norm; and
- since most of the resources are shared or straddling stocks, there was the need for subregional cooperation in assessment and management.

Discussion

33. During the discussion that followed the presentations of the regional reviews the information and observations provided by the participants of the fishing industry in relation to the state of exploitation of the fishery resources concerned, confirmed the trends identified by the Ad Hoc Working Group as enunciated in the previous paragraphs.

34. Various hypotheses, such as pollution from anthropogenic activities, rainfall, El Niño, chemical use in agriculture, overfishing, and impact of various fishing gear and methods,

were presented to explain the declining trends. However, there was no consensus on any single explanation.

PERSPECTIVES OF RESOURCE MANAGERS

35. Experts of each participating country presented their national reports on the respective species evaluated by the Ad Hoc Working Group and which were in document WECAFC/B-G/I/3 and WECAFC/B-G/I/4. The results of the analyses conducted by the Ad Hoc Working Group and their management recommendations and implications were highlighted. The regional reviews, introduced by the Secretariat under Agenda Item 5, contained a summary of these national results.

36. The industry representatives had specific questions on the results and the management recommendations presented by the national experts. These were answered by the experts and contributed to the dialogue. The presentations and questions stimulated a lively exchange of information and experiences that involved all interested parties, especially among representatives of the industry.

37. The comments, observations and discussions were centered mainly on the appropriateness, implications and ability to implement and enforce the management recommendations presented by the national experts of the participating countries. Even though opposing views were expressed and defended with respect to some of the proposed management measures, the participants agreed that actions have to be taken now to arrest the declining trends in production.

38. The Conference agreed that these management options must be discussed among the interested parties, at the national level, with a view to taking management decisions at this level. Management decisions should take into account the information generated by the Ad Hoc Working Group and which has been shared with all the countries of the subregion. The Conference suggested that the subject be discussed further in a working group.

39. The Conference highly appreciated the technical work performed by the Ad Hoc Working Group and recommended that it should be continued. The Conference was of the view that technical inputs from the Ad Hoc Working Group were essential for the success of meetings like this one. The fishing industry representatives agreed in principle to support the work of the Ad Hoc Working Group.

ENVIRONMENTAL CONSIDERATIONS IN MANAGEMENT OF SHRIMP AND GROUNDFISH FISHERIES IN THE BRAZIL-GUIANAS SHELF

40. The Secretariat introduced the above-mentioned paper that was contained in document WECAFC/B-G/I/4. In presenting the paper the Secretariat highlighted the environmental features of the Brazil-Guianas Shelf, the impact of fisheries on the ecosystem and its productivity, the impact of human activities on the marine ecosystem and the relative importance of fisheries impacts on the ecosystem and its productivity.

41. The main conclusions and recommendations were that the effect of fisheries on the environment was considerable in the Brazil-Guianas region and can affect fisheries productivity, and that interactions between fisheries and the environment were difficult to define and quantify. The identification, monitoring and protection of critical habitats that

were of importance for the functioning of the ecosystem and/or for the life cycle of exploited species was recommended. The scope of fisheries investigations should be broadened to include ecosystem considerations. Since all the countries in the subregion faced similar environmental impacts on their fisheries and the costs involved in addressing these impacts were considerable for any single country, regional cooperation was recommended to address environmental impacts on fisheries in the Brazil-Guianas Shelf.

42. In exchanging views on the subject and based on their empirical observations, participants, especially those from the fishing industry, were able to agree with some of environmental impacts mentioned in the paper. The Conference agreed that interactions between fisheries and the environment in the Brazil-Guianas Shelf were difficult to define and quantify, and that research should also focus attention on these issues rather than only on the fish stocks. In this regard, it was agreed that the paper was a good starting point.

Research as function of fishery management

43. In making his presentation on this subject, Dr Power referred to the findings of the study on food availability and predator presence in the coastal nursery areas for brown shrimp (*Crangon crangon*) conducted in the north coast of the Netherlands in 1986 by the Netherlands Institute for Fishery Investigation, and pointed out its relevance to the region. He emphasized the need to do similar studies on the stomach contents of Penaeid shrimp species in the various stages of its life cycle. The results of these studies should support the formulation of better management strategies for this fishery.

44. The Conference in thanking Dr Power for his presentation noted that research was an essential ingredient for sustainable fisheries and for the implementation of the Code of Conduct for Responsible Fisheries.

ISSUES IDENTIFIED BY THE FISHING INDUSTRY

45. The meeting identified the following issues that were discussed in working groups:

a) Management Measures and Implications for Shrimp and Seabob Fisheries

- Closed season/restricted area
- Reduced effort

b) Research and Regional Cooperation in Research.

- Observer programme
- Support of industry
- Data and information

c) The Way Forward

46. Three working groups were established to discuss these issues. The reports of the working groups were as follows.

REPORT OF WORKING GROUP I : MANAGEMENT MEASURES AND IMPLICATIONS FOR SHRIMP AND SEABOB FISHERIES

47. Working Group I comprised the following members.

Name	Country	Institution
J. Aragão	Brazil	CEPNOR
G. Bourguignon	French Guiana	Unifipeche
R. Charles (Rapporteur)	Guyana	Guyana Quality Seafoods Inc.
R. Feenstra	Suriname	Boat Owner
Y. Hagiwara	Japan/Suriname	Nisshin Fisheries
T. Ishikawa	Japan/Suriname	Nichimo Co. Ltd.
J. Lee	Korea/ Suriname	Se-Won Co.
E. Mannes	Suriname	SAIL N.V.
L. Piggott	Guyana	Georgetown Seafoods & Trading
M. Rajkumar (Chair)	Guyana	Guyana Association of Trawler Owners & Seafood Processors
L. Romalho	Suriname	Guiana Seafoods
T. Sato	Japan/Suriname	TAFCO
P. Sewdien	Suriname	Namoona Fisheries
V. Souleres	France	CLS
I. Sue	Korea/Suriname	Mona Co.
M. v.d. Veen	Suriname	Holsu N.V.
I. Vieira	Brazil	CEPNOR
S. Yamaguchi	Japan/Suriname	Nichimo Co. Ltd.

Closed season

48. The principal benefit expected to be derived from closing the season was an increase in the biomass of the resource mainly as a result of protecting recruits, which would attain greater size when the fishery reopens.

49. The concerns expressed by the industry included idle plants and workers being unemployed during the closed season, market obligations not being fulfilled, and in the case of Penaeid shrimp, an additional month down time before the plant could start functioning again. Effective monitoring, control and surveillance during the period of the closed season were also a concern to ensure that the closed season was not breached.

50. The Brazilian delegation shared its experiences with respect to closed seasons. Biological analyses were conducted to identify the peak period of recruitment of shrimp. Based on these analyses the closed season was recommended for four months (October to January) since 1986. This was determined by the period of peak recruitment and low catches. Initially, the industry opted to close their operations at different and shorter periods that were advantageous to them (e.g. during Christmas Holidays), which did not coincide with the recommended period. Finally, the industry agreed to comply with the recommended period for 2002, but only for three and a half months. The Brazilian delegation felt that closed season was an effective management measure and easy to apply.

51. In Brazil, during the closed season for shrimp from capture fisheries, some of the processing plants process farmed shrimp. The plants also contracted workers for the period when the season was open or send workers on vacation during the closed season and conduct maintenance of vessels and plant equipment. Further, some workers benefited from unemployment insurance.

52. The representative from French Guiana thought that more technical information, such as information to determine the period for closure (since there is recruitment all year round), was required to consider the implementation of a closed season. It was also necessary to determine the benefits to be derived from a closed season and to explain why a four-month closure may be necessary. However, the industry in French Guiana was discussing closed seasons, closed areas and reducing effort in addition to maintaining the quota system already established.

53. The Suriname participants were open-minded. Their concerns included the plight of the workers, market issues, a total closure (i.e. all trawlers must be prohibited from fishing) and the need for more technical information. It was pointed out that the migration patterns of juveniles for both shrimp and seabob should be considered. Suriname agreed to further discuss the subject with all the participants of the fishing industry before taking a decision on the issue.

54. The Guyanese participants noted that Guyana would introduce a closed season from October to November for six weeks, mainly through a vigorous initiative from the industry. They were employing a flexible approach and would adjust the closed season as more information becomes available. Also, the impacts of the closed season would be evaluated after a period of three years.

55. All the countries concluded that a closed season was a management measure to be applied, and that individually they would be examining it.

56. The group recommended that neighbouring countries should monitor their production and catch rates to determine if there was any effect, positive or negative, on the closure adopted by their neighbours. The group envisaged that an annual staggering of closed seasons could be adopted by the countries of the region in the future. Biological analyses would have to be done to determine this staggered closed season arrangement.

Restricted areas and effort reduction

57. French Guiana has restricted trawling from the 30 m isobath shorewards mainly to prevent conflicts between industrial and artisanal fishers. However, permission could be sought to trawl within that area for brief periods if it was justifiable. It was observed that this regulation was known to be violated frequently. The group agreed that restricted areas were created to protect spawning stocks or juveniles or merely to preserve nursery areas. Brazil found it difficult to monitor and control restricted areas while other countries have done it for other reasons (e.g. protection of turtle nesting areas in Guyana). All the countries have been considering it and would continue to evaluate the feasibility of implementing closed areas as a management tool.

58. French Guiana was in the process of implementing a Vessel Monitoring System (VMS) for shrimp trawlers.

59. It was pointed out that all the countries of the subregion were experiencing reduced effort in terms of number of trawlers. In Guyana shrimp trawlers have switched to seabob fishing over the years but the total number of trawlers has remained more or less constant.

60. In the case of Trinidad and Tobago, although not represented on this group, the country experts made mention of these issues in the presentation of their national report. Restricted areas and seasons have been implemented primarily to reduce conflict among the various trawler fleets, and among the trawler fleets and fleets employing other gears. Further research would be required to provide a biological basis for determining appropriate closed areas and seasons. With regard to effort reduction, a 1988 Cabinet Note prohibited the entry of additional trawlers. However, this was not enforced for the artisanal fleets. It was enforced only to a certain extent for the semi-industrial and industrial fleets. Attempts were currently being made to implement mechanisms to more effectively enforce the provisions of the Cabinet Note. The Trinidad experts also indicated that their trawl industry supported the implementation of closed areas and seasons as well as the implementation of a licensing regime for all vessels and limitation of fishing effort in order to sustainably utilize the shrimp and groundfish resources. The industry also recognized the importance of collaboration among the countries of the Guianas-Brazil Shelf, and Venezuela in particular, in research and management of these resources.

REPORT OF WORKING GROUP II: RESEARCH AND REGIONAL COOPERATION

61. Working Group II comprised the following members.

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R. Lieveld	Suriname	Fisheries Department
T. Phillips	St. Vincent	CARICOM Fisheries Unit
R. Power (Chair)	Suriname	Fisheries Department
P. Raghubar	Suriname	Guianas Seafoods
P. Ramgobin	Guyana	Fishermen's Co-op Society Ltd.
S. Rosan	Suriname	Ministry of Agriculture
S. Soomai (Rapporteur)	Trinidad and Tobago	Fisheries Division
E. Samson	Suriname	Sujafi, N.V.
R. Sewdien	Suriname	Planning Department
M. Yspol	Suriname	Fisheries Department

62. In discussing the subject the group recommended the following:

- Research needs should be driven by the management issues and questions identified within the national and regional fishery management plans. Most countries have an approved or draft fishery management plan for their respective fisheries.
- Fisheries administrations were very often unable to collect all the necessary data and information required for management decision-making due to inadequate staffing

and funds. The group recommended that partnerships be developed with the fishing industry, universities and other research institutions to overcome these constraints. Universities can assist with research on fish biology, maturity, migration and ecosystem modelling.

- Work of the Ad Hoc Working Group should be continued and the studies already conducted by the group should be sustained and improved.
- Two types of data collection programmes should be implemented in the countries, onshore (random sampling at landing sites and logbooks) and observer programmes.

63. The group suggested the following regarding data collection and information:

- The networking of all institutions and countries involved in fisheries research in the subregion.
- The current mechanisms for data collection and analysis, information sharing and dissemination should be maintained and supported.
- The results of analyses should be provided to government and industry in a timely manner and based on the current data available.
- The analysis of the impact of agriculture and land based activities on fisheries should be conducted.
- The implementation of Integrated Coastal Fisheries Management (ICFM).
- The continuity of data gathering and analyses (time series). In this regard the responsibilities of researchers should be prioritised. It was pointed out that researchers often have other responsibilities.
- The networking among countries of the region should be promoted to facilitate information sharing and exchange.
- The assessment of the feasibility of utilising new technologies such as, GIS (Global Information System) and VMS (Vessel Monitoring System) systems, in order to facilitate data collection should be conducted. Training may be necessary in the use of the technology.
- The collection and storage of data by countries of the subregion should be compatible in order to facilitate joint analyses, where applicable.

64. With respect to closed seasons for Penaeid shrimp species the group suggested that the following data and information were required for analysis before determinations could be made:

- maturity data, size and distribution by species and age structure;
- migration patterns of the species;
- recruitment patterns and nursery areas (specific for shrimp and fish); and
- social and economic data to assist in determining impacts of closed seasons and mitigation measures.

65. The group noted that observer programmes were already established in some countries. It stressed the need for continuity of observer programmes and to make improvements where necessary. The following observations were highlighted by the group:

- The industry plays an integral role in the success of any data collection programme, particularly the observer programme. In some countries the industry was accommodating observers onboard their vessels and providing victuals in some cases. Fisheries administrations should therefore be obligated to keep the industry and other interested parties periodically informed of the data requirements and results of analyses. This can be achieved through the preparation of reports, updates and consultation meetings.
- It was necessary to periodically review data collected and data collection systems to be able to determine whether additional data parameters were to be collected or what changes should be made to improve the efficiency.
- The observer programme should also be evaluated periodically to determine if the programme was cost effective, if it provided credible data, and to identify the successes and failures, and the lessons learnt.
- The industry should play an integral role in the evaluation of the observer programme.
- In order to build a strong relationship between the industry and the fisheries administrations regular informal workshops should be held to discuss the results of the data collection programme and related matters. This should foster industry confidence in the results of the data collection programme.
- Countries with observer programmes already in place should assist in establishing programmes in countries where they do not exist.
- The observer programme should be used to corroborate data obtained from onshore and other data collection programmes.
- The debriefing of observers should be conducted in a timely manner after their return to shore.
- The need to ensure sustainability of the observer programme and quality of data collected was emphasized. This can be accomplished through the following processes:
  - Establishment of a collaborative mechanism, comprising the fisheries department, coast guard and fishing industry, to oversee the observer programme.
  - Provision of incentives for observers to remain offshore. Observers have become less committed to the job and the quality of data had deteriorated (due to inadequate salaries). Additional sources of funds apart from the government, such as the fishing industry, international donor agencies, should be identified for supporting the observer programme.
  - Provision of timely reports on the value and outputs of the observer programme to other government departments, such as finance and planning departments, was necessary to secure adequate funds for fisheries data collection programmes.
  - Introduction of service fees, such as a licensing regime that bring in revenue, which can be used to run research programmes, where such service fees do not exist.
  - Establishment of a research fund with contributions from the fishing industry.

REPORT OF WORKING GROUP III: THE WAY FORWARD

66. Working Group III comprised the following members:

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F. Barbosa (Chair)	Brazil	Fisheries Department
B. Balkaran	Guyana	Ministry of Fisheries
L. Ferreira (Rapporteur)	Trinidad and Tobago	Fisheries Division
L. Heidanus	Suriname	SAIL N.V.
M. Mahadew	Suriname	Fisheries Department
J. Sahtoe	Suriname	Ministry of Agriculture
R. Soerodimejo	Suriname	SAIL N.V.

67. Based on the conclusion of the plenary that meetings of this nature were a useful approach to contribute to better management of the shrimp and groundfish fisheries of the Brazil-Guianas large marine ecosystem, Working Group III was requested to identify the way forward.

68. The group agreed that the exercise of bringing together all interested parties to discuss issues of common concern was well in line with the recommendations contained in the Code of Conduct for Responsible Fisheries and with the national objectives of the six countries concerned. The common goal was the sustainability of the fisheries of the subregion. The group agreed that it would be a good contribution to the above-mentioned purpose if this type of meeting was organized on a periodic basis. These regular sessions could greatly contribute, in the longer term, to the establishment of a subregional fisheries management body.

69. The group identified a number of priority areas that could be addressed efficiently by meetings of the Brazil-Guianas Shelf, if it had continuity in its functioning. These areas were as follows:

- encourage stakeholders at the regional level to contribute to fisheries research;
- support for the continuation of the activities of the Ad Hoc Working Group on the shrimp and groundfish resources of the Brazil-Guianas Shelf;
- promote exchange of information, enhance communication and facilitate consultation among all interested parties (fishing industry, government, scientists, etc.);
- promote collaboration between the fishing industry/private sector and the technical Ad Hoc Working Group in relation to the established programme of work of the latter;
- discuss and evaluate the management measures recommended by the technical Ad Hoc Working Group;
- promote capacity building initiatives at all levels (national, regional, private and public sector);
- promote the harmonization and enactment of national fisheries legislation;
- encourage bilateral and multilateral relations where appropriate;

- contribute to the enhancement of data collection and information flow to support fisheries research activities at the national and regional levels; and
- evaluate the impact of the implementation of recommended management measures.

70. The group recommended that this type of meeting be held on a regular basis and welcomed the proposal made at the plenary session by the government representative of Brazil to host a second meeting of the interested parties of the Brazil-Guianas Shrimp and Groundfish fisheries in May/June 2003.

71. The group also suggested that the delegation of Brazil nominate a national focal point for the organization of the meeting and invite two other countries of the subregion to be part of an ad hoc coordinating committee to provide support in such a task.

GENERAL

72. The reports of the three working groups were discussed and approved in plenary session.

73. The plenary unanimously agreed that meetings of this nature were essential for contributing to the achievement of sustainable use of the fisheries resources in the subregion and should be held on a periodic basis. In this regard the offer of Brazil to host the next meeting in 2003 was welcomed.

ANY OTHER MATTERS

74. The Brazilian Ambassador to Suriname made the following statement:

> *At the opening of this meeting, when thanking you for our election as Vice-Chair, our delegation expressed the willingness and openness of the Government of Brazil to co-operate at the subregional level with the countries of this subregion with the purpose to improve the management and sustainable use of the fishery resources of the Brazil-Guianas large marine ecosystem. We also offered to host the next Conference that will bring together, for more fruitful exchange of information and experience, representatives of the governments, industry and scientific community concerned with the fisheries of the subregion.*
>
> *We would like now to confirm our commitment to subregional cooperation expressed earlier. In this regard we would like to inform the meeting that Brazil is planning to propose in the near future some technical support cooperation activities that could be of benefit to the subregion, utilising and making available as relevant, the good level of technical expertise, human resources and infrastructure for fisheries research available in our country.*

75. The Conference thanked the Brazilian Ambassador for the generous offer and suggested that FAO should follow-up on this offer for technical support.

DATE AND PLACE OF THE NEXT MEETING

76. The Conference noted the offer made by Brazil to host the next Conference on the Sustainability of Fisheries in the Brazil-Guianas Shelf in Belem, Brazil, in May/June 2003. In this regard, Brazil nominated Mr Jose Italo Vieira of CEPNOR, Brazil, as the focal point.

CLOSING

77. The Honourable Minister of Agriculture made a brief presentation thanking all the participants and organizers who contributed to making the Conference a success. He singled out the excellent support his Government had received from the FAO. The Minister was happy with the results of the Conference, and that there would be continuity. He looked forward to participating in the next meeting in Brazil and thanked the Government of Brazil for offering to host it. He also thanked the Brazilian Ambassador to Suriname for his Government's offer of technical support in fisheries research and management to the countries of the subregion.

APPENDIX A. AGENDA

1. Opening of the Session
2. Election of the Chair
3. Adoption of the Agenda
4. Code of Conduct for Responsible Fisheries
5. Review of State of Shrimp and Groundfish Fisheries in the Brazil-Guianas Region (biological, environmental, economic and social)
6. Environmental Considerations in Management of Shrimp and Groundfish Fisheries in the Brazil-Guianas Shelf
7. Issues facing the Fishing Industry
8. Conclusions and Recommendations
9. Any Other Matters
10. Date and Place of the Next Meeting

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APPENDIX C. LIST OF DOCUMENTS

WECAFC/B-G/I/1	Provisional Agenda
WECAFC/B-G/I/2	Report of the Meeting of Fisheries Managers and Ministers of the WECAFC Ad Hoc Working Group on Shrimp and Groundfish Resources in the Brazil-Guianas Shelf, Trinidad and Tobago, 26-29 March 2001
WECAFC/B-G/I/3	Report of the Fourth Workshop on the Assessment and Management of Shrimp and Groundfish Fisheries on the Brazil-Guianas Shelf, Cumana, Venezuela, 2-13 October 2000
WECAFC/B-G/I/4	Existing Approaches to Fisheries Management in the Brazil-Guianas Shelf
WECAFC/B-G/I/5	Background to Shrimp and Groundfish Resources of the Region (Brazil-Guianas Shelf)
WECAFC/B-G/I/Inf.1	Background Information and Objectives of the Conference
WECAFC/B-G/I/Inf.2	Ministers' Joint Statement, Meeting of Ministers, Trinidad and Tobago, 29 March 2001

This document is the final version of the report of the First Regional Conference on the Sustainability of Fisheries Resources in the Brazil-Guianas Shelf, held in Paramaribo, Suriname, from 5 to 7 March 2002. The main objectives of the conference were to share information and the best scientific evidence available on the status of the main commercial species of shrimp and groundfish in the region, discuss and evaluate management recommendations and their applicability and discuss a way forward for improving cooperation in fisheries research and management in the subregion. This was the first time fisheries scientists, managers and the fishing industry met to evaluate collectively the scientific information generated by the countries and the management measures proposed, and to decide on follow-up actions.

The conference agreed that meetings of this nature were essential for achieving sustainable use of the fisheries resources of the Brazil-Guianas Shelf and should be held regularly. Regular meetings should contribute to the formation of a regional fisheries management body for the Brazil-Guianas Large Marine Ecosystem in the longer term. Brazil offered to host the next meeting in 2003. With respect to the state of exploitation of the fisheries resources, the conference confirmed the trends identified by the Western Central Atlantic Fishery Commission Ad Hoc Working Group. The conference further expressed strong appreciation for the group's work and recommended that it be continued. The fishing industry agreed in principle to support the ad hoc group. Even though opposing views were expressed and defended with respect to some of the proposed management measures, it was agreed that management actions had to be taken now to arrest the declining trends in production. The conference agreed that a closed season for shrimp was a management measure to be applied and that it should be examed individually by each country.

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